

Population Projections

Miami-Dade County

2006 to 2030

Introduction

The population projections attached (see Table 1 and Figure 1) replace the previous series done prior to the 2000 Census. These new projections that incorporate the 2000 Census and more recent data should provide a better guide to future population growth in Miami-Dade County.

Methodology

The projection method is basically unchanged.¹ This is a **component method** where births, deaths, and migration flows (the “components” of population change) are estimated separately and then combined for total population change. The following paragraphs summarize the assumptions used in making the projections.

Assumptions

1. **Births** are derived by applying a crude birth rate to the mid-year population. The rate used in these projections shows a slow decline over time from 13.7 births per 100,000 population in 2005 to 12.8 in 2030. This is a somewhat slower rate of decline than that used in the previous series and is in line with recent trends.
2. **Deaths** are derived by applying a death rate to the mid-year population. The rate used in these projections shows a slow decline over time from 7.7 deaths per 100,000 population in 2005 to 7.5 in 2030. This is a much slower rate of decline that was used in the previous series. However, the death rate for the end year 2030 remains higher than the projected rate for the nation.
3. **Domestic in-migration and out-migration** figures are derived from a tabulation of personal exemptions on matched income tax returns as reported by the Internal Revenue Service. The returns do not cover all of the population, only about three of every four persons in Miami-Dade County. The Census Bureau and the University of Florida deal with this by using the data to establish a **rate of movement** that is then applied to the total population. The basic assumption here is that the non-covered population moves from county to county in patterns similar to the movement of the covered population.

In Miami-Dade County, and perhaps other counties with high numbers of undocumented aliens and high poverty rates, this assumption may be questionable. In these gateway counties the non-covered population is different and probably does not migrate like the covered population. The non-covered population includes those with low incomes who are not required to file and those with unreported income who are paid in cash or in kind and who may not have social security numbers. These usually have fewer financial and social resources and are probably less mobile than covered persons. Their

¹ See Miami-Dade Department of Planning and Zoning, “Population Projections: Miami-Dade County, 1999 to 2020,” (Miami: October 2000).

relative concentration in Miami-Dade County is certainly higher than the national average. Thus, using IRS data to estimate a rate of movement may overstate the number of out-migrants.

In these projections the IRS data are not used to establish a rate. Instead, the actual figures are compared with decennial census figures on county-to-county migration and used directly to estimate the annual migrant flows. The IRS data show a declining trend over most of the past 15 years. However, since 2002 there has been an unexplained upturn. For this projection series, domestic in-migration was projected to increase steadily to about 40,000 persons in 2030. Domestic out-migration was projected to decrease to about 80,000 in 2030. More details on the basis for these assumptions are presented in the appendix.

4. **Net immigration** is the excess of persons moving into Miami-Dade from other countries over persons emigrating. There is little information available on emigration from the United States or from specific areas such as Miami-Dade. The immigrant inflow is also difficult to gauge because of the large number of undocumented aliens. This inflow is volatile and is greatly influenced by political and economic change outside the United States. Again, these flows are difficult to project. For this series, Census Bureau current estimates were compared with decennial census data and net immigration was projected to increase steadily to 55,000 a year in 2030. More details on the basis for this assumption are presented in the appendix.

Results

The projections show population growing more or less in line with the previous projection series (see Figure 2). Growth for the remainder of this decade is projected to average just under 30,000 persons a year. This number is projected to increase to 31,600 persons in the period 2021-2030. Net migration, inclusive of domestic migration and immigration is expected to be somewhat over the 15,000 person level throughout the projection period. This represents a decrease from the previous projection series. Natural increase is projected to steadily increase from throughout the projection period, increasing from annual rate under 15,000 to almost 17,000 in 2030.

The projected population for 2025 is 3,019,390. This is very close to the number from the previous projection series of 3,019,785 for the same year. Population is expected to rise to 3,178,164 in 2030. Births and deaths are projected to increase slowly but steadily over the 20-year time span at levels. Domestic out-migration flows also increase steadily but a lower rate than in the past. Net domestic out-migration increases steadily to about 40,000 a year in 2030, but these losses are more than offset by the projected increase in immigration that climbs to about 55,000 for the same end year.

Figure 3 presents the components of change in a bar chart to illustrate the different patterns of change in net migration and natural increase.

Table 1
Population Projections
Components of Change

Miami-Dade County, Florida: 2000 to 2030								
Year Ending March 31	Resident Population	Population Change	Net Migration	Natural Increase	Resident Births	Resident Deaths	Net Immigration	Domestic Migration
2000	2,253,485	35,017	21,183	13,834	32,300	18,466	45,905	-24,722
2001	2,289,222	35,737	22,354	13,383	32,425	19,042	45,824	-23,470
2002	2,316,676	27,455	13,508	13,947	32,131	18,184	40,302	-26,794
2003	2,344,033	27,357	13,175	14,182	32,551	18,369	36,479	-23,304
2004	2,370,937	26,904	13,212	13,692	32,045	18,353	38,663	-25,451
2005	2,403,472	32,365	18,534	14,001	32,365	18,364	38,723	-20,189
2006	2,435,517	32,045	17,306	14,545	35,104	20,559	41,171	-23,864
2007	2,467,583	32,066	17,210	15,128	35,855	20,727	41,747	-24,537
2008	2,499,667	32,084	17,114	14,778	35,669	20,891	42,323	-25,209
2009	2,531,769	32,101	17,018	14,892	35,945	21,053	42,899	-25,881
2010	2,563,885	32,116	16,922	15,004	36,216	21,212	43,476	-26,554
2011	2,596,014	32,129	16,826	15,114	36,483	21,369	44,052	-27,226
2012	2,628,155	32,140	16,730	15,222	36,744	21,522	44,628	-27,898
2013	2,660,304	32,150	16,634	15,328	37,002	21,673	45,204	-28,571
2014	2,692,461	32,157	16,538	15,432	37,254	21,822	45,781	-29,243
2015	2,724,623	32,162	16,442	15,535	37,502	21,967	46,357	-29,915
2016	2,756,788	32,165	16,345	15,635	37,745	22,110	46,933	-30,588
2017	2,788,954	32,166	16,249	15,733	37,983	22,250	47,509	-31,260
2018	2,821,119	32,165	16,153	15,829	38,216	22,387	48,085	-31,932
2019	2,853,282	32,162	16,057	15,924	38,445	22,521	48,662	-32,604
2020	2,885,439	32,158	15,961	16,016	38,669	22,653	49,238	-33,277
2021	2,917,590	32,151	15,865	16,106	38,887	22,781	49,814	-33,949
2022	2,949,731	32,142	15,769	16,194	39,101	22,907	50,390	-34,621
2023	2,981,861	32,130	15,673	16,280	39,310	23,030	50,967	-35,294
2024	3,013,979	32,117	15,577	16,364	39,514	23,150	51,543	-35,966
2025	3,046,081	32,102	15,481	16,446	39,713	23,267	52,119	-36,638
2026	3,078,165	32,084	15,385	16,526	39,906	23,381	52,695	-37,311
2027	3,110,230	32,065	15,289	16,603	40,095	23,492	53,271	-37,983
2028	3,142,273	32,043	15,192	16,679	40,279	23,600	53,848	-38,655
2029	3,174,293	32,020	15,096	16,752	40,458	23,705	54,424	-39,328
2030	3,206,287	31,994	15,000	16,824	40,631	23,807	55,000	-40,000
Decade	Ten-Year Annual Average Change, 1961 to 2030							
1961-1970		33,295	25,511	7,784	18,451	10,667	NA	NA
1971-1980		35,800	32,025	3,775	18,311	14,536	NA	NA
1981-1990		30,731	20,163	10,568	27,882	17,314	36,717	-13,423
1991-2000		28,648	14,712	13,936	32,452	18,516	32,213	-17,501
2001-2010		31,023	16,635	14,355	34,031	19,675	41,161	-24,525
2011-2020		32,155	16,394	15,577	37,604	22,027	46,645	-30,251
2021-2030		32,085	15,433	16,477	39,789	23,312	52,407	-36,974

Source: U.S. Bureau of the Census, Decennial Census 1960-2000. Post-2000 figures, Miami-Dade Planning & Zoning Department, Research Section, 2007.

Appendix

Using the IRS Data to Estimate County-to-County Migration and Rationale for Net Immigration Assumptions in Miami-Dade County, Florida

This appendix presents more details on the assumptions about future migration flows into and out of Miami-Dade County over the next 20 years. Migration is clearly the determining factor in the growth of the County. It is the divergence of recent migration estimates from the projections that triggered this projection update.

In this new series domestic and foreign migration flows are projected separately, whereas previously migration was treated as a single net figure. The additional detail allows for a more explicit statement of the assumptions about the future. The future is unknown, of course, and migration flows here are more changeable and uncertain than in most areas of the United States. For this reason, the Department of Planning and Zoning monitors the components of population change in the County and proposes revisions and updates when needed.

The first part of this Appendix deals with the Internal Revenue Service (IRS) data, which are the primary source of information about domestic migration flows. The second part deals with immigration from other countries. This is primarily a review of census estimates of immigration, since Immigration and Naturalization Service data on immigration appears to be incomplete.

IRS data on personal exemptions on matched income tax returns was used to estimate the flow of migrants from one county to another. The Census Bureau and the University of Florida Bureau of Economic and Business Research use an IRS-based **rate of migration** that is applied to the total population.

The key issue in using the IRS data as a rate is the question of who is covered and who is not. About 537,000 persons or 27 percent of the total resident population in Miami-Dade County in 1992/93, for example, were not covered.² Using the IRS matched income tax returns to develop a rate of movement, assumes that the population not covered by tax returns moves in patterns similar to those who are covered. If a 73 percent coverage is assumed ($100-27=73$) then the IRS population data can be inflated to the total population by multiplying by 1.37 ($100/73=1.37$). This is the method employed by the Census Bureau and by the University of Florida Bureau of Economic and Business Research and the results seem to be high when compared with decennial census data (see below).

However, the assumption may not be correct. There is evidence that the non-covered population is different from those covered by income tax reports. The non-covered group includes those who are not required to file a return

² 1992/93 was the last year for which IRS non-mover data were readily available.

(members of low-income households) and those who do not report income at all. The latter include those with no social security number and those working for cash, a significant group in Miami's low-pay, service-based economy where many undocumented aliens are able to find a job. This non-covered population is less likely to move out of the County at the same rate as those who are covered simply because they have less resources and may have difficulty finding comparable social and economic support in other communities. A similar non-covered population exists outside Miami-Dade County but it is a relatively smaller group and there is a smaller proportion of undocumented immigrants. Thus, the use of the IRS-based rate might be expected to overstate the net outflow.

Here is an illustrative comparison of IRS and decennial census data. The IRS reported an annual average of 57,750 out-migrants in the 1986 to 1990 period. Inflated by 37 percent the estimated total out-migration is 79,109. The decennial census out-migration figure for the same period was 48,062 or closer to 50,000 if an allowance is made for the population less than five years old who were excluded from the census data. In sum, the census data show roughly two out-migrants for every three based on IRS data. This appears to be too big a difference to be accounted for by the annual basis of IRS data versus the five-year span of the decennial census data.

Table A1 presents a more complete comparison of IRS-based domestic migration flows with 1990 census data for Miami-Dade. The census data are adjusted for undercounts and for the exclusion of persons less than five years of age. The census question covers a five-year period and thus excludes persons of less than five years. The question asked in the census was "Where did this person live 5 years ago (on April 1, 1985)?" The IRS data is on an annual basis. Those persons who moved out of Miami-Dade to Broward in one year, for example, and then moved back the next year are counted twice in the IRS returns, but would not show up in the five-year census data. Overall, the IRS data, as noted above, should show higher numbers of movers, both in and out, than the census data. The data in Table A1 show this expected pattern, even without inflating the IRS figures. The uninflated IRS figures are higher by 11.8 percent for in-migrants and 12.4 percent for out-migrants, figures that are similar in size but result in an 18.1 percent increase in net outmigration. In sum, the IRS data for reasons that are unclear suggest migration flows that are higher than those measured by decennial census data.

Despite the apparent overstatement of migration flows, the IRS data closely follow the expected ups and downs of migration flows and the detailed geographic origins and destinations of movers. For this reason, the migration assumptions used in this projection series are trend lines based on the actual (not inflated) IRS data with some minor adjustments as noted below.

Table A1

Adjustment Factors for IRS Data for Miami-Dade

County to County Migration Flows			
	In-migrants	Out-migrants	Net Movers
Census Movers 1985-90	202,586	240,311	(37,725)
Inflated for <5 Years	210,082	249,203	(39,121)
Hispanic Origin Movers	80,018	52,046	27,972
Undercount Adjustment	1.05	1.05	NA
Undercount Adjusted	84,019	54,648	29,371
Adjusted For Hisp. Under.	214,083	251,805	(37,722)
Total Undercount Adjusted	218,364	256,841	(38,477)
Indirect Immigrants	12,500	0	12,500
Census-based Estimate	230,864	256,841	(25,977)
IRS 1986-90	258,078	288,746	(30,668)
IRS/Census-based Est.	111.8%	112.4%	118.1%

Source: Miami-Dade Dept. of Planning & Zoning, Research Section, 1999.

Census data inflated by 3.7 percent to include persons less than five years. The inflation factor is half of this group's proportion of total population.

Differential undercount was highest for Hispanics.

Total population adjustment is an overall undercount factor, set at 2 percent.

Indirect immigrants are persons who lived abroad in 1985, but came to Miami-Dade after living elsewhere in the U.S. Estimate based on an analysis of Census Public Use Microdata files showing year of immigration for persons living elsewhere in the U.S. in 1985.

The uninflated IRS data were charted and trend lines were developed with appropriate allowances for some unusual conditions in the 1982 to 1997 period.

- The inflow of Cuban refugees from Mariel in 1980 coupled with race riots in the same year resulted in large outflow of Miami-Dade residents to other parts of the United States in the 1980 to 1982 period.
- This was also a period of economic recession in the United States, which tends to dampen migration flows.
- The impact of Hurricane Andrew in 1992 also resulted in a large outflow from Miami-Dade in 1992 and early 1993, although this was partially offset by a return flow in 1993 and 1994.

In general, the adjustments to the IRS data were minor (in-migrants inflated by 2.8 percent and out-migrants deflated by 2.1 percent) except in the hurricane year (1993) when Miami-

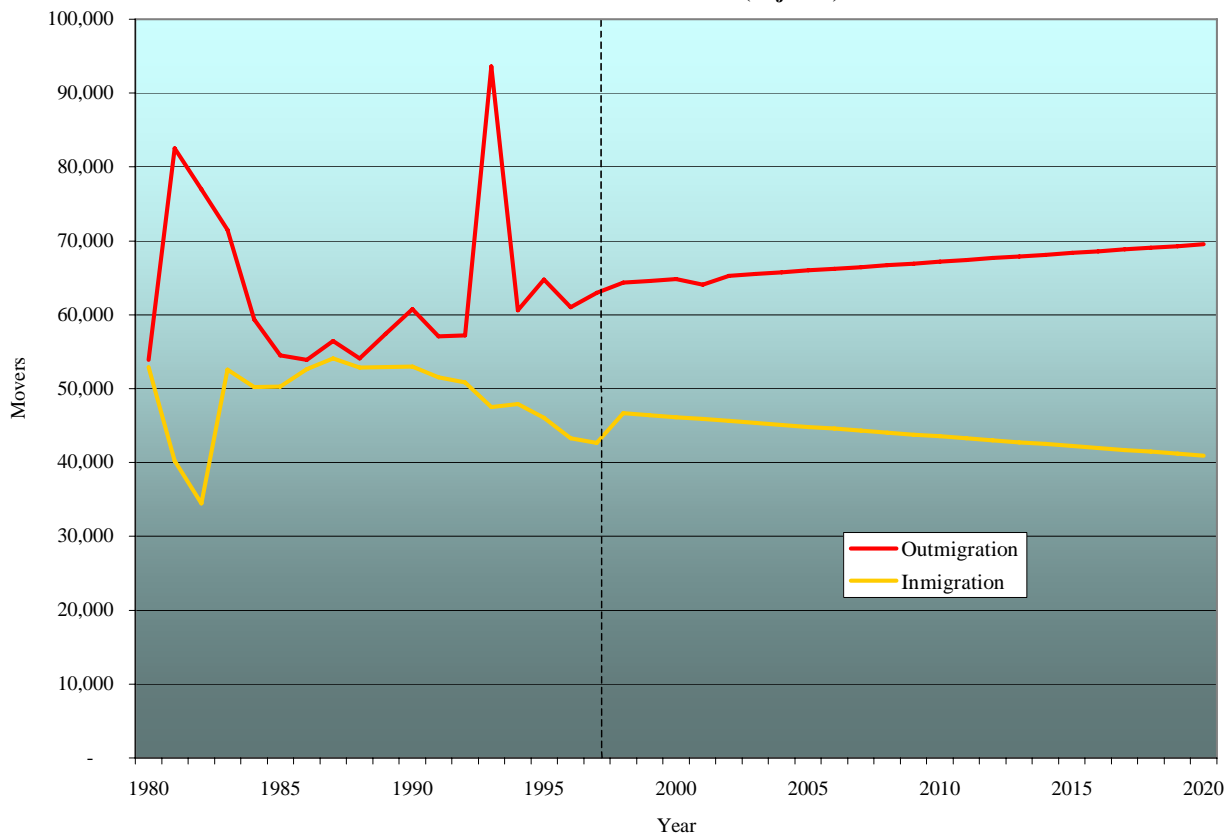
Dade estimates showed a much higher outflow (15,000 persons or 18 percent higher than the IRS data showed). The data are presented in Table A2 and in Figure 4.

Table A2

Domestic Migration Flows--Miami-Dade County			
Based on 1980 Census and IRS Reports post-1980			
Adjusted			
Year	Ins	Outs	Net
1976	52,900	53,900	(1,000)
1977	52,900	53,900	(1,000)
1978	52,900	53,900	(1,000)
1979	52,900	53,900	(1,000)
1980	52,900	53,900	(1,000)
1981	40,250	82,500	(42,250)
1982	34,500	77,000	(42,500)
1983	52,585	71,500	(18,915)
1984	50,184	59,348	(9,164)
1985	50,249	54,533	(4,284)
1986	52,629	53,850	(1,221)
1987	54,065	56,447	(2,382)
1988	52,860	54,103	(1,243)
1989	52,925	57,414	(4,489)
1990	52,986	60,766	(7,780)
1991	51,513	57,049	(5,536)
1992	50,809	57,184	(6,375)
1993	47,521	93,608	(46,087)
1994	47,940	60,643	(12,703)
1995	46,082	64,749	(18,668)
1996	43,288	61,005	(17,717)
1997	42,668	62,975	(20,306)
1998	46,655	64,333	(17,678)
1999	46,395	64,571	(18,176)
2000	46,135	64,808	(18,673)
2001	45,874	64,044	(18,170)
2002	45,614	65,281	(19,667)
2003	45,354	65,518	(20,164)
2004	45,094	65,755	(20,661)
2005	44,833	65,992	(21,159)
2006	44,573	66,229	(21,656)
2007	44,313	66,466	(22,153)
2008	44,053	66,702	(22,649)
2009	43,792	66,939	(23,147)
2010	43,533	67,176	(23,643)
2011	43,272	67,413	(24,141)
2012	43,012	67,650	(24,638)
2013	42,751	67,887	(25,136)
2014	42,491	68,123	(25,632)
2015	42,231	68,360	(26,129)
2016	41,971	68,597	(26,626)
2017	41,710	68,834	(27,124)
2018	41,450	69,071	(27,621)
2019	41,190	69,308	(28,118)
2020	40,930	69,545	(28,615)

Source: Miami-Dade Department of Planning and Zoning, Research Section, 1999.

Figure 4
Domestic Migration Flows
Miami-Dade County, 1983-2020
Based on IRS Data (Adjusted)



Overall, the data show a long-term decrease in the number of in-migrants and a corresponding increase in the number of out-migrants. The decrease in in-migrants also showed up in the 1990 census data after little or no change in the three previous censuses. Accordingly, a domestic *in-migration* figure of about 40,000 was set for the year 2020 based on a linear extrapolation of data from 1982 through 1997. This was also in line with the trend suggested by an analysis of

census-based estimates from the last four censuses. Similarly, based on a linear extrapolation, a domestic *out-migration* figure of 70,000 was set for the year 2020. This was also in line with the census-based estimates. Projected gross domestic migration flows for each year of the projection period were estimated by means of a linear interpolation of the INS data and the 2020 figures.

Immigration data are incomplete. The Immigration and Naturalization Service has good data on immigrants, both new arrivals and those adjusting their status, but has little information about undocumented immigrants. These undocumented immigrants, estimated by the Miami-Dade

Department of Planning and Zoning at 350,000 in 1998, constitute a large share of the recent foreign inflow to Miami-Dade County. The 2020 figure for net immigration was developed by extrapolating decennial census data.

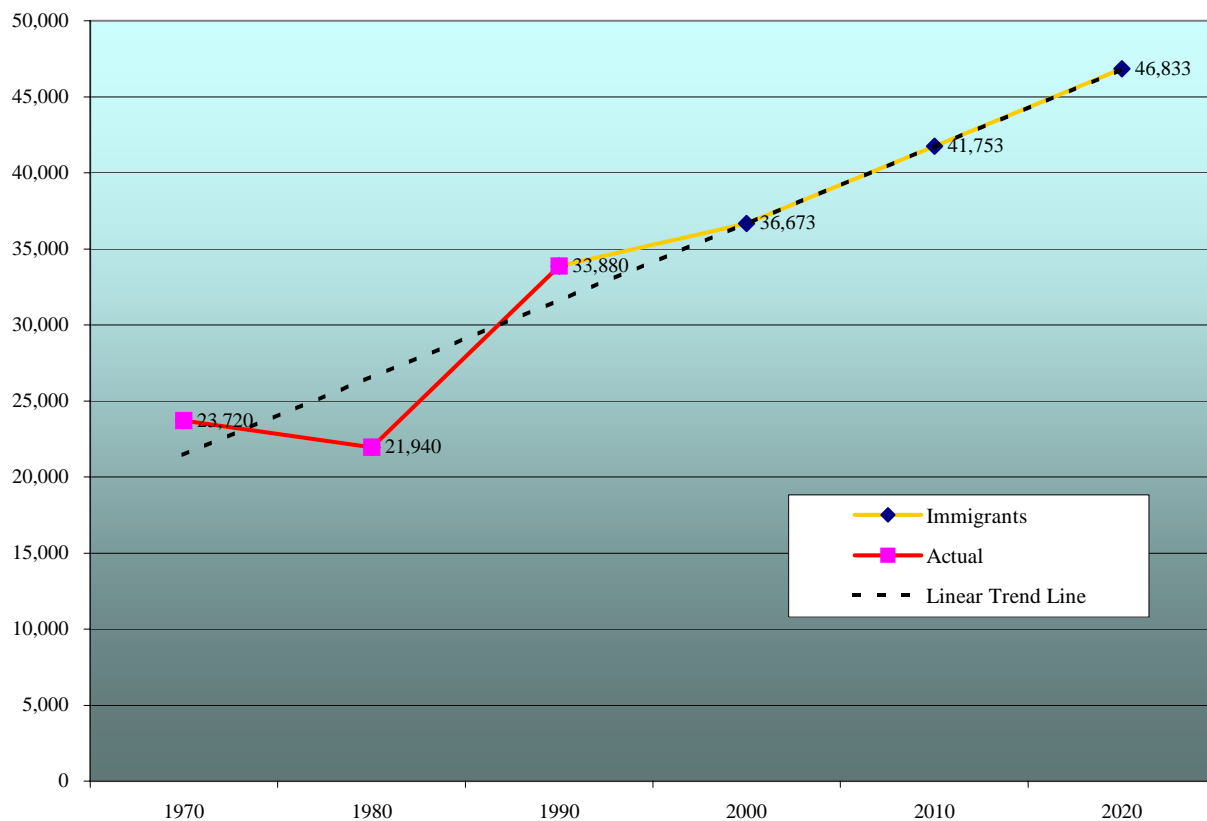
The past three decennial censuses (1970, 1980, and 1990) showed a rapid increase in immigration to Miami-Dade County from 24,000 a year in the late 1960s to 34,000 a year in the late 1980s (see Figure 5). The 1960 census showed a low level of immigration averaging 6,500 persons a year in the late 1950s. This was prior to the Cuban exodus, which commenced in 1959. The 1960 data were excluded from the trend calculation. The 1980 census figure shows a decline in the level of immigration when compared with the 1970 figure. However, this decline was more than compensated for by the large immigration from Cuba in the six months immediately

following census day in 1980. The extrapolated annual average figure for the period 2015 to 2020 was 47,000 immigrants. The gross immigration figure for the year 2020 was set at 50,000 persons, which includes an adjustment for census undercount (5 percent) and 2020 being the last year of the five-year period. Deduct about 2,000 emigrants and the net figure for 2020 is 48,000. Figures for the intervening years of the projection period were estimated on the basis of a linear interpolation of data derived from 1982 to 1997 estimates and the 2020 projection.

There are many reasons to project continued growth in the flow of immigrants to Miami-Dade County. The geographic

countries of the Caribbean and Central and South America. The population of Miami-Dade

Figure 5
Immigrants to Miami-Dade County
Annual Average for Five Years Prior to Census
1970 to 2020



location of the County is close to the most populated

County is composed predominantly of persons born abroad. Many of the residents of the County, perhaps as much as 50 percent, routinely converse and transact business in Spanish, Creole, and Portuguese, the languages spoken in countries

that are the traditional source of most immigrants. For these and other reasons it is likely that immigration will continue to increase and constitute a large part of the total population increase of the County.

The focus on migration flows must be balanced by some consideration of the impact of natural increase on population growth. Birth and death rates are projected to remain unchanged or to decline slightly but the number of births and

deaths will continue to increase (see Figures 6 and 7). By the year 2020 natural increase will account for about 43 percent of the total population growth of the County, about the same proportion as projected for the year 2000.

Figure 6
Crude Birth Rates
Miami-Dade & U.S.
1960 to 2020

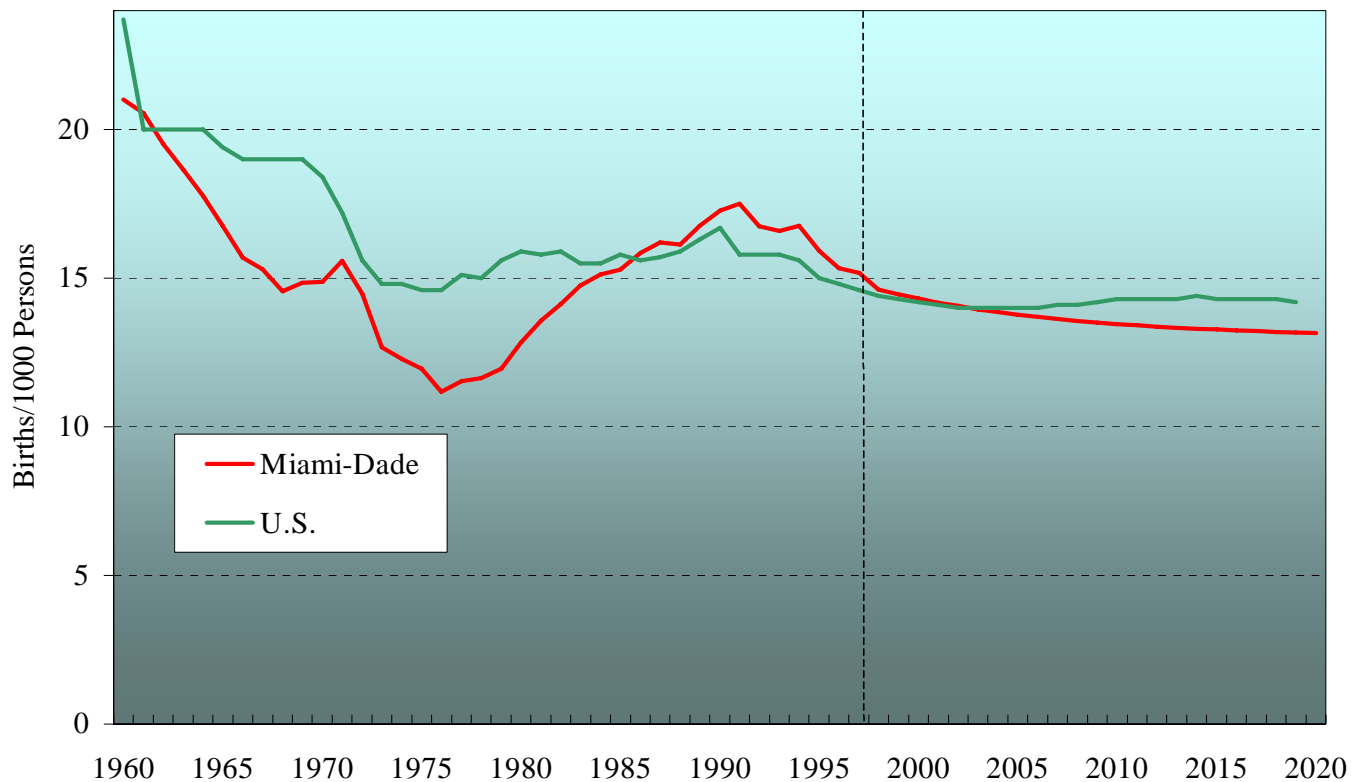


Figure 7
Births & Deaths
Miami-Dade County
1960-2020

